**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. **(currently amended)** An integrated apparatus for optically monitoring a ~~optical monitoring of~~ semiconductor workpiece for process control in a ~~the~~ semiconductor production process, said apparatus comprising: [[;]]

a supporting assembly for supporting said workpiece; and

an optical monitoring unit ~~accommodated~~ positioned opposite a ~~the~~ surface of said workpiece and separated therefrom by an optical window, wherein said optical monitoring unit is mounted for reciprocating movement within a plane parallel to said window for monitoring at least one desired parameter of said semiconductor workpiece and ~~having a~~ has pattern recognition and ~~an~~ auto-focusing ~~utilities~~ capabilities;

wherein said optical window comprises ~~one or~~ a plurality of relatively small window fragments located in pre-determined locations to enable observation of desired pre-determined portions of said workpiece; [[,]] and

~~and~~ wherein the size and shape of said window fragments are selected according to ~~the~~ requirements of transparency in a pre-determined spectral range, mechanical strength and ability of pattern recognition and auto-focusing.

2. **(currently amended)** The integrated ~~Integrated~~ apparatus according to claim 1, wherein said desired portions of the workpiece include the center and part of the edge of said workpiece.

3. **(currently amended)** The integrated ~~Integrated~~ apparatus according to claim 2, wherein at least one of said optical window fragments is of a ~~circle's sector~~ shape of a sector of a circle.

4. **(currently amended)** The integrated ~~Integrated~~ apparatus according to claim 2, wherein at least one of said optical window fragments is of a rectangular shape.

5. **(currently amended)** The integrated ~~Integrated~~ apparatus according to claims 4, wherein said window fragments comprise at least one ~~additional~~ window fragment having a ~~bent strip-like~~ strip shape bent around the ~~workpiece'~~ edge of the workpiece.

6. **(currently amended)** The integrated ~~Integrated~~ apparatus according to claim 1, wherein said optical monitoring unit comprises ~~comprising~~ a spectrophotometer.

7. **(currently amended)** The integrated ~~Integrated~~ apparatus according to claim 1, wherein said optical monitoring unit comprises ~~comprising~~ an ellipsometer.

8. **(currently amended)** The integrated ~~Integrated~~ apparatus according to claim 1, wherein said semiconductor workpiece is a wafer.

9. **(currently amended)** The integrated ~~An integrated~~ apparatus according to claim 1, wherein said workpiece has ~~for optical monitoring semiconductor workpiece having~~ an axis of symmetry, and ~~wherein~~ said supporting assembly is mounted for substantially slow rotation.

10. **(currently amended)** A method of optically ~~for optical~~ monitoring a semiconductor workpiece having an axis of symmetry for process control in ~~the~~ a semiconductor production process, said method comprising the steps of: [[;]]

optically ~~optical~~ scanning the workpiece using a movable optical unit through an optical window comprising ~~designed as~~ a plurality of relatively small fragments located in pre-determined locations to enable observation of desired portions of the workpiece, ~~wherein~~ the size and shape of said fragments being selected according to ~~the~~ requirements of transparency in ~~the~~ a pre-determined spectral range, mechanical strength and ability of pattern recognition and auto-focusing; and

~~and~~ defining at least one desired parameter of said semiconductor workpiece at said desired portions of the workpiece.

11. **(currently amended)** The method ~~Method for optical monitoring semiconductor workpiece~~ according to claim 10, wherein said desired portions of the workpiece include the center and part of the edge of said workpiece.

12. **(currently amended)** The method ~~Method for optical monitoring semiconductor workpiece~~ according to claim 10, further comprising rotation of said workpiece by a pre-determined angle.

13. **(currently amended)** The method ~~Method for optical monitoring semiconductor workpiece~~ according to claim 10, wherein ~~the track of~~ said optical scanning ~~is designed in such manner that enables~~ includes pattern recognition and autofocusing.

14. **(currently amended)** The method ~~Method for optical monitoring semiconductor workpiece~~ according to claim 10, wherein said workpiece has a multi-layer structure and said at least one desired parameter is a thickness of at least one of the ~~workpiece'~~ layers of said workpiece.

15. **(currently amended)** The method ~~Method for optical monitoring semiconductor~~

~~workpiece~~ according to claim 14, wherein said optical scanning includes measuring [[of]] spectral characteristics of light response of the scanned portions of the workpiece.

16. **(new)** An apparatus for optically monitoring a semiconductor workpiece in a semiconductor production process, said apparatus comprising:

a chamber defining a measuring area and having on a wall thereof an optical window;

a support disposed inside said chamber for supporting said workpiece; and

an optical monitoring unit disposed outside said chamber and facing a surface of said workpiece and separated therefrom by said optical window, said optical monitoring unit being moveable relative to said support for monitoring at least one parameter of said semiconductor workpiece;

wherein

said optical window comprises at least one window fragment located at a predetermined location corresponding to a predetermined portion of said workpiece where said at least one parameter is to be monitored;

an entire area of said at least one window fragment is smaller than an entire area of said workpiece;

said window fragment is made of a material transparent to wavelengths in a spectral range used by said optical monitoring unit and has a mechanical strength sufficient to sustain a pressure difference between pressures inside and outside said chamber.

17. **(new)** The apparatus of claim 16, wherein said chamber is a vacuum chamber in CVD equipment and said workpiece is a wafer.

18. **(new)** The apparatus of claim 16, comprising multiple said window fragments, wherein a sum of entire areas of all said window fragments is smaller than the entire area of said workpiece.

19. **(new)** The apparatus of claim 18, wherein

said optical monitoring unit is mounted for reciprocating movement within a plane parallel to said window; and

said support is rotatable about an axis.

20. **(new)** The apparatus of claim 19, wherein said windows fragments are arranged to cover all desired portions of said workpiece where said at least one parameter is to be monitored so that said at least one parameter can be determined at all desired portions of said workpiece in a single scanning action without additional relative rotational movement between said optical monitoring unit and said support.

21. **(new)** The apparatus of claim 18, wherein at least one of said windows fragments has a shape of a sector of a circle having a radius greater than a radius of said workpiece which is a wafer.

22. **(new)** The method of claim 10, wherein, in said scanning step, said movable optical unit scans only predetermined portions of a surface of said workpiece, which is a semiconductor wafer, without scanning an entirety of said surface of said semiconductor wafer.

**AMENDMENTS TO THE DRAWINGS:**

The attached replacement sheet of drawings includes changes to Figs. 1 and 2. The replacement sheet, which includes Figs. 1-2, replaces the original sheet including Figs. 1-2. In each of Figs. 1 and 2, a legend "Prior Art" has been added.

Attachment: Replacement Sheet